

**Notice of Allowability**

Application No.

09/832,505

Examiner

Tu T. Nguyen

Applicant(s)

QIAN ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/17/2004.
2. ☒ The allowed claim(s) is/are 1-122.
3. ☒ The drawings filed on 10 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Tu T. Nguyen  
Primary Examiner  
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### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Specification, page 8, **Replace lines 11-14 with the following:**

*– Figure 4 is a flowchart of a method for performing Time Domain Reflectometry using Gaussian pulses, according to one embodiment;*

*Figures 5A-5E illustrate example signals with Gaussian pulses, according to one embodiment –*

### ***Response to Arguments***

Applicant's arguments, filed on 02/17/2004, with respect to the Election/Restriction (01/15/2004) have been fully considered and are persuasive. The Election/Restriction (01/15/2004) of claims 1-122 has been withdrawn.

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

Prior arts of record does not disclose a system for performing Time Domain Reflectometry (TDR) using Gaussian pulses. The system comprises: a digitizer coupled to a computer and a waveform generator, wherein the waveform generator for generating a modulated Gaussian pulse and transmit the pulse to the digitizer and a DUT, wherein the digitizer for receiving and digitizing a signal comprising a plurality of Gaussian pulses, wherein the plurality of Gaussian pulses comprises the transmitted Gaussian pulse and one or more reflected Gaussian pulses which structurally arranged and functionally operated as claimed in claim 1.

Prior arts of record does not disclose a method for performing TDR on a device under test using Gaussian pulses. The method comprises: receiving a signal comprising a first sequence of values, wherein the signal comprises an initial modulated Gaussian pulse and one or more reflected modulated Gaussian pulses; characterizing a first modulated Gaussian pulse in the signal; subtracting the first modulated Gaussian pulse

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from the signal to produce a modified signal; repeating said characterizing and said subtracting as claimed in claims 29,53.

Prior arts of record does not disclose generating a coarse estimate set of N parameters for the first modulated Gaussian pulse; generating a plurality of permutations of the coarse estimate set of the parameters; determining a refined set of N parameter values using the plurality of parameter sets as disclosed in claims 77,100.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen  
Primary Examiner  
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04/28/2004